

Special Issue

Biotechnological Advances in Plant-Based Pharmaceuticals

Message from the Guest Editors

Plants have long been a source of valuable bioactive compounds for humans, and with the advent of biotechnology, this resource has been enriched in ways that continue to amaze us today and will undoubtedly continue to do so for a long time. This special issue of *Plants* focuses on recent innovations that leverage biotechnological tools to drive the discovery and production of promising drugs or compounds for this sector, including recombinant proteins. We highlight cutting-edge approaches such as metabolic engineering, synthetic biology, and plant cell and tissue culture systems, which improve the yield and consistency of pharmaceutically relevant compounds. Special attention is also paid to omics-based strategies—including genomics, transcriptomics, proteomics, metabolomics, and epigenomics—as well as the use of artificial intelligence for the identification and functional characterization of specialized plant metabolites. This special issue seeks to promote sustainable, efficient, and innovative solutions for the development of plant-derived pharmaceuticals.

Guest Editors

Dr. Diego Hidalgo-Martinez

Department of Biology, Health and Environment, Faculty of Pharmacy and Food Sciences, University of Barcelona, 08028 Barcelona, Spain

Dr. Luciana R. Tallini

Department of Biology, Health and Environment, Faculty of Pharmacy and Food Sciences, University of Barcelona, 08028 Barcelona, Spain

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Plants
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
plants@mdpi.com

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Message from the Editor-in-Chief

Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, and conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

Editor-in-Chief

Prof. Dr. Dilantha Fernando
Department of Plant Science, University of Manitoba, Winnipeg, MB
R3T 2N2, Canada

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